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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,501	06/01/2001	Tetsuko Takabe	026350-053	7822

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07/21/2003

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EXAMINER

COLLINS, CYNTHIA E

ART UNIT

PAPER NUMBER

1638

DATE MAILED: 07/21/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/870,501

Applicant(s)

TAKABE, TETSUKO

Examiner

Cynthia Collins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5 and 7-21 is/are pending in the application.
- 4a) Of the above claim(s) 1,2 and 7-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5 and 19-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 12.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

The Amendment filed May 2, 2003, paper no.14, has been entered.

Claims 1-2 and 7-18 are withdrawn from consideration.

Claims 3-4 and 6 are cancelled.

Claims 5 is newly amended.

Claims 19-21 are newly added.

Claims 1-2, 5 and 7-21 are pending.

Claims 5 and 19-21 are examined.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

All previous objections and rejections not set forth below have been withdrawn.

Information Disclosure Statement

An initialed and dated copy of Applicant's IDS form 1449, filed March 4, 2003, Paper No. 12, is attached to the instant Office action.

Claim Rejections - 35 USC § 112

Claim 5 remains rejected, and claims 19-21 are rejected, under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, for the reasons of record set forth in the office action mailed January 2, 2003.

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Applicant's arguments filed May 2, 2003, have been fully considered but they are not persuasive.

Applicant argues that the claim amendments render the rejection moot (reply pages 8-9).

The claim amendments do not render the rejection moot because the claims are still drawn to isolated nucleic acid sequences wherein no more than 5 nucleotides have been added to, deleted from, or substituted in the nucleic acid sequence consisting of nucleotides 1 to 1,089 of SEQ ID NO:2, isolated nucleic acid sequences which hybridize to nucleic acid sequences consisting of nucleotides 1 to 1,089 of SEQ ID NO:2 or encoding amino acids 1 to 291 of SEQ ID NO:1 under low or moderately stringent conditions, isolated nucleic acid sequences encoding amino acids 1 to 291 of SEQ ID NO:1 wherein no more than 5 amino acids have been added to, deleted from, or substituted in the polypeptide consisting of amino acids 1 to 291 of SEQ ID NO:1, and isolated nucleic acid sequences exhibiting 90% homology to any of the above nucleic acid sequences. The specification does not describe the specific structure and function of any such sequences.

Claim 5 remains rejected, and claims 19-21 are rejected, under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an isolated nucleic acid of SEQ ID NO:2 encoding a polypeptide of SEQ ID NO:1 that confers heat stress tolerance to a plant, does not reasonably provide enablement for other isolated nucleic acids encoding other polypeptides, for the reasons of record set forth in the office action mailed January 2, 2003.

Applicant's arguments filed May 2, 2003, have been fully considered but they are not persuasive.

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Applicant argues that the claim amendments render the rejection moot (reply pages 8-9).

The claim amendments do not render the rejection moot because the claims are still drawn to isolated nucleic acid sequences wherein no more than 5 nucleotides have been added to, deleted from, or substituted in the nucleic acid sequence consisting of nucleotides 1 to 1,089 of SEQ ID NO:2, isolated nucleic acid sequences which hybridize to nucleic acid sequences consisting of nucleotides 1 to 1,089 of SEQ ID NO:2 or encoding amino acids 1 to 291 of SEQ ID NO:1 under low or moderately stringent conditions, isolated nucleic acid sequences encoding amino acids 1 to 291 of SEQ ID NO:1 wherein no more than 5 amino acids have been added to, deleted from, or substituted in the polypeptide consisting of amino acids 1 to 291 of SEQ ID NO:1, and isolated nucleic acid sequences exhibiting 90% homology to any of the above nucleic acid sequences. The specification does not provide sufficient guidance for one skilled in the art to determine, without undue experimentation, which no more than 5 nucleotides to add to, delete from, or substitute in the nucleic acid sequence consisting of nucleotides 1 to 1,089 of SEQ ID NO:2 in order to obtain a functional polynucleotide. The specification does not provide sufficient guidance for one skilled in the art to determine, without undue experimentation, which hybridization conditions would yield functional polynucleotides. The specification does not provide sufficient guidance for one skilled in the art to determine, without undue experimentation, which no more than 5 amino acids may be added to, deleted from, or substituted in the amino acid sequence consisting of amino acids 1 to 291 of SEQ ID NO:1 in order to obtain a functional polypeptide. The specification does not provide sufficient guidance for one skilled in the art to determine, without undue experimentation, which nucleic acid

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sequences exhibiting 90% homology to the multitude of sequence variants above would be functional sequences and which would not.

Claim 5 remains rejected, and claim 19 is rejected, under 35 U.S.C. 112, second paragraph, as being indefinite in the recitation of "under stringent conditions", for the reasons of record set forth in the office action mailed January 2, 2003.

Applicant's response filed May 2, 2003 does not explicitly address the previous rejection of claim 5 under 35 U.S.C. 112, second paragraph, although Applicant makes mention of the indefiniteness of the claims in the traversal of the rejections under 35 U.S.C. 112, first paragraph, at pages 8-9 of the reply, which indicates that Applicant believes that the claim amendments render moot the indefiniteness of the original claims. The claim amendments do not render moot the indefiniteness of the original claims with respect to the recitation of "under stringent conditions", as the claims still fail to indicate how stringent the conditions must be to yield the desired nucleic acid sequences.

Claim Rejections - 35 USC § 102

Claim 5 remains rejected, and claims 19-21 are rejected, under 35 U.S.C. 102(b) as being anticipated by Bunkelmann et al. (GenBank Accession No. U37060, 23 April 1997, and SPTREMBL Accession No. Q38780, 01 November 1996), for the reasons of record set forth in the office action mailed January 2, 2003.

Applicant's arguments filed May 2, 2003, have been fully considered but they are not persuasive.

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Applicant argues that the claim amendments render the rejection moot because claims 20 and 21 require 90% homology to the isolated nucleic acid sequences of claim 19 and claim 5. Applicant also argues that Bunkelmann et al. does not anticipate the claimed nucleic acids because to anticipate a claim a single source must contain all the elements of the claim, and Bunkelmann et al. do not teach sequences “derived from barley” and “induced by high-temperature stress” (reply pages 9-10).

The claim amendments do not render the rejection moot. The isolated nucleic acid sequences of claims 20 and 21 require 90% homology not only to a nucleic acid sequence of SEQ ID NO:2 or a nucleic acid sequence encoding SEQ ID NO:1, but also to the multitude of nucleic acid sequence variants encompassed by claims 19 and 5. Furthermore, the claimed sequences read on sequences from obtained from any source whether or not they are induced by high-temperature stress because the genetic code is universal. Accordingly, the claim limitations “derived from barley” and “induced by high-temperature stress” do not impose any specific structural limitations on the claimed nucleic acid sequences because the genetic code used by barley is identical to the genetic code used by all species of organisms, and because the genetic code is not altered by high-temperature stress induction.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Remarks

No claim is allowed

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Collins whose telephone number is (703) 605-1210. The examiner can normally be reached on Monday-Friday 8:45 AM -5:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on (703) 306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

CC
July 16, 2003

DAVID T. FOX
PRIMARY EXAMINER
GROUP 180-1638

